



BILLING CODE 6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**[EPA-HQ-OPP-2016-0226; FRL-9946-53]**

**Pesticides; Draft Guidance for Pesticide Registrants on Herbicide Resistance Management**

**Labeling, Education, Training, and Stewardship**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of availability.

**SUMMARY:** The Agency is announcing the availability of and seeking public comment on a draft Pesticide Registration Notice (PR Notice) entitled “Guidance for Herbicide Resistance Management Labeling, Education, Training, and Stewardship.” PR Notices are issued by the Office of Pesticide Programs (OPP) to inform pesticide registrants and other interested persons about important policies, procedures, and registration-related decisions, and serve to provide guidance to pesticide registrants and OPP personnel. This draft PR Notice (2016-XX) communicates the Agency’s approach to addressing herbicide-resistant weeds by providing guidance on labeling, education, training, and stewardship for herbicides undergoing registration review or registration (*i.e.*, new herbicide and actives, new uses proposed for use on herbicide-resistant crops, or other case-specific registration actions).

**DATES:** Comments must be received on or before *[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]*.

**ADDRESSES:** Submit your comments, identified by docket identification (ID) number EPA-HQ-OPP-2016-0226, by one of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the online instructions for submitting comments. Do not submit electronically any information you

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consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001.

- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at <http://www.epa.gov/dockets/contacts.html>.

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at <http://www.epa.gov/dockets>.

**FOR FURTHER INFORMATION CONTACT:** Bill Chism, Biological and Economic Analysis Division (7503P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: (703) 308-8136; email address: [chism.bill@epa.gov](mailto:chism.bill@epa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **I. General Information**

#### *A. Does this Action Apply to Me?*

This action is directed to the public in general. Although this action may be of particular interest to those persons who are required to submit data under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) or are required to register pesticides. Since other entities may also be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action.

#### *B. What Should I Consider as I Prepare My Comments for EPA?*

1. *Submitting CBI.* Do not submit this information to EPA through [regulations.gov](http://www.regulations.gov) or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD-ROM that you mail to EPA, mark the outside of the disk or CD-ROM

as CBI and then identify electronically within the disk or CD-ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for preparing your comments.* When preparing and submitting your comments, see the commenting tips at <http://www.epa.gov/dockets/comments.html>.

*C. How Can I Get Copies of this Document and Other Related Information?*

A copy of draft PR Notice 2016-XX, “Guidance for Herbicide Resistance Management Labeling, Education, Training, and Stewardship” and any related or supporting information are available in the docket under docket identification (ID) number EPA-HQ-OPP-2016-0226.

## **II. Overview of the Agency’s Effort to Address Pesticide Resistance**

Pesticides can be used to control a variety of pests, such as insects, weeds, rodents, bacteria, fungi, etc. Over time many pesticides have gradually lost their effectiveness because pests have developed resistance – a significant decrease in sensitivity to a pesticide, which reduces the field performance of these pesticides. The Agency is concerned about resistance issues and believes that managing the development of pesticide resistance, in conjunction with alternative pest-management strategies and Integrated Pest Management programs, is an important part of sustainable pest management. To address the growing issue of resistance and preserve the useful life of pesticides, the Agency is beginning to embark on a more widespread effort and several activities that are aimed at combating and slowing the development of pesticide resistance.

One such activity, which is the subject of this FR Notice, is today's release and request for comment on draft PR Notice 2016-XX, "Guidance for Herbicide Resistance Management Labeling, Education, Training, and Stewardship." Draft PR Notice 2016-XX, which only applies to herbicides, communicates the Agency's current thinking and approach to address herbicide-resistant weeds by providing guidance on labeling, education, training, and stewardship for herbicides undergoing registration review or registration (*i.e.*, new herbicide actives, new uses proposed for use on herbicide-resistant crops, or other case-specific registration actions). It is part of a holistic, proactive approach to slow the development and spread of herbicide-resistant weeds, and prolong the useful lifespan of herbicides and related technology. The Agency is focusing on the more holistic guidance for herbicides first because they are the most widely used agricultural chemicals, no new herbicide mechanism of action has been developed in last 30 years, and herbicide-resistant weeds are rapidly increasing. In the future, the Agency plans to evaluate other types of pesticides (*e.g.*, fungicides, bactericides, insecticides, and acaricides) to determine whether and what guidance may be appropriate for these types pesticides. If the Agency releases future guidance on these other types of pesticides, we plan to seek input from the public.

Another such activity, involves the release of draft PR Notice 2016-X, "Guidance for Pesticide Registrants on Pesticide Resistance Management Labeling. Draft PR Notice 2016-X, which updates PR Notice 2001-5, applies to all conventional, agricultural pesticides (*i.e.*, herbicides, fungicides, bactericides, insecticides, and acaricides). Draft PR Notice 2016-X focuses on pesticide labels and is aimed at improving information about how pesticide users can minimize and manage pest resistance. This draft PR Notice will also be published in today's **Federal Register**.

### **III. Background on Herbicide Resistance**

For the purposes of draft PR Notice 2016-XX and this FR Notice, the Agency defines herbicide resistance as the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type. Resistance may be naturally occurring or induced by such techniques as genetic engineering or selection of variants produced by tissue culture or mutagenesis.

The development and spread of herbicide-resistant weeds in agriculture is a widespread problem that has the potential to fundamentally change production practices in United States agriculture. While herbicide-resistant weeds have been known since the 1950s, the number of species and their geographical extent, has been increasing rapidly in the last decade. As of March 2016, Heap reports that there are 249 weed species with confirmed herbicide resistance worldwide and 80 unique weed species with herbicide resistance in the United States (Heap, 2016). Considering that some weed species have developed resistance to more than one mechanism of action (MOA) independently, there are 155 weed species/MOA combinations with confirmed resistance (Heap, 2016). These 155 combinations have shown resistance to herbicides with 18 different MOAs. In the United States, 48 states have reported the presence of herbicide-resistant weeds and there are over 80 crops and sites (*e.g.* roadsides, pastures, and railways) with herbicide-resistant weeds.

As noted earlier, draft PR Notice 2016-XX primarily focuses on herbicides at this time for several reasons. First, herbicides are the most widely used agricultural chemicals. Over 285 million acres were treated on nearly 800,000 farm operations in 2012 (USDA, 2014). Second, unlike fungicides and insecticides, there have been no new herbicide MOAs developed in the last 30 years. Therefore, users do not have a new MOA to control herbicide-resistant weeds and it's important to protect the long term efficacy of these chemistries. Third, the number of herbicide-resistant weeds and the affected acreage infested is rapidly increasing. Finally,

growers are facing severe economic impacts from herbicide-resistant weeds with up to 100% crop loss in some cases.

#### **IV. What Guidance Does this PR Notice Provide?**

This draft PR Notice communicates the Agency's approach to addressing herbicide-resistant weeds by providing guidance on labeling, education, training, and stewardship for herbicides undergoing registration or registration review. The Agency's guidance divides 28 herbicide MOAs into three categories of concern (low, moderate, high) based on the risk of developing herbicide-resistant weeds. The guidance also provides 11 elements that are focused on labeling, education, training, and stewardship strategies. Herbicides with the least concern for developing herbicide-resistant weeds will have the fewest resistance management elements, and herbicides with the greatest concern will have the most elements. The guidance in this draft PR Notice 2016-XX is intended to provide herbicide users and registrants with useful strategies that, when implemented, will slow herbicide resistance and prolong the useful life of herbicides. The beneficiaries of this draft PR Notice will be growers of crops that are, or may be, affected by herbicide-resistant weed and the registrants of herbicides. This draft PR Notice is applicable to all herbicides regulated by the Agency. Once the Agency receives and considers public comments on this draft PR Notice, we expect to revise and finalize the draft PR Notice by late 2016.

#### **V. Do PR Notices Contain Binding Requirements?**

The PR Notice discussed in this FR Notice is intended to provide guidance to EPA personnel and decision-makers, as well as pesticide registrants. While the requirements in the statute and Agency regulations are binding on EPA and the applicants, this PR Notice is not binding on either EPA or pesticide registrants, and EPA may depart from the guidance where

circumstances warrant and without prior notice. Likewise, pesticide registrants may assert that the guidance is not appropriate generally or not applicable to a specific pesticide or situation.

## **VI. References**

The following is a listing of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

1. Heap, I. 2016. International Survey of Herbicide-resistant Weeds. March 11, 2016.  
[Http://www.weedscience.org](http://www.weedscience.org)
2. USDA. 2014. 2012 Census of Agriculture. United States Department of Agriculture.

**Authority:** 7 U.S.C. 136 *et seq.*

Dated: May 23, 2016.

Jack E. Housenger,

*Director, Office of Pesticide Programs.*

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